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AMENDMENTS TO THE CLAIMS

The following listing of claims will replace all prior versions and listings of claims in the application.

LISTING OF CLAIMS

1.-103. (cancelled)

104. (twice amended) A method for making an ultra high molecular weight polyethylene (UHMWPE) article, for subsequent processing to make an artificial joint, comprising:

(a) crosslinking a raw UHMWPE article slightly with low dose irradiation; and then

(b) heating said irradiated article to a compression deformable temperature of from 50º C below the melting point of said article to 80º C above said melting point;

(c) compression deforming the heated article; and then

(d) cooling the article while maintaining the deformed state.

105-108. (cancelled)

109. (amended) A method according to Claim 104, wherein pressure is applied during said heating step.

112.-113. (cancelled)

114. (twice amended) A method for making an ultra high molecular weight polyethylene (UHMWPE) article which is suitable for subsequent processing to make an artificial joint, so as to improve the wear resistance properties of said article, comprising:

(a) crosslinking a raw UHMWPE article slightly with low dose irradiation; and then

(b) heating said irradiated article to a compression deformable temperature of from 50º C below the melting point of said article to 80º C above said melting point;

(c) compression deforming the heated article; and then

(d) cooling the article while maintaining the deformed state.

115.-118. (cancelled)

120.-129. (cancelled)

130. (twice amended) A method for making an ultra high molecular weight polyethylene (UHMWPE) article, for subsequent processing to make an artificial joint, comprising:

(a) crosslinking a raw UHMWPE article slightly with low dose irradiation; and then

(b) heating the irradiated article to a compression deformable temperature by heating at a temperature from its melting point minus 50°C to its melting point plus 80°C;

(c) applying pressure to said irradiated article at a deformation temperature; then

(d) heating said irradiated article to a temperature of from around 100º C to 130º C for a period of at least 1 hour; and then

(e) cooling the heated article while maintaining the deformed state.

131.-134. (cancelled)

135. (twice amended) A method according to Claim 130, wherein said deformation temperature is between 50º C below the melting point of said article and said melting point.

136. (twice amended) A method according to Claim 130, wherein said deformation temperature is from said melting point to 80º C above said melting point.

137.-138. (cancelled)

139. (twice amended) A method of making a component for an artificial joint comprising ultra high molecular weight polyethylene (UHMWPE), comprising:

(a) crosslinking a raw UHMWPE article slightly with low dose irradiation; and then

(b) heating the irradiated article to a compression deformable temperature by heating at a temperature from its melting point minus 50°C to its melting point plus 80°C;

(c) applying pressure to said irradiated article at a deformation temperature;

(d) heating said irradiated article to a temperature of from around 100º C to 130º C for a period of at least 1 hour; and then

(e) cooling the article while maintaining the deformed state; and then

(f) processing said article to make said component.

140.-143. (cancelled)

144. (twice amended) A method according to Claim 139, wherein said deformation temperature is between 50º C below the melting point of said article and said melting point.

145. (twice amended) A method according to Claim 139, wherein said deformation temperature is from said melting point to 80º C above said melting point.

146.-148. (cancelled)

149. (new) A method according to claim 104, wherein the irradiation is gamma-irradiation.

150. (new) A method according to claim 104, wherein the raw UHMWPE article comprises UHMWPE having a weight average molecular weight of 2 - 8 million.

151. (new) A method according to claim 104, wherein the article comprises UHMWPE having 0.1 – 10 crosslinking points per 1 molecular chain.

152. (new) A method according to claim 104, wherein the irradiation dose is from 0.01 to 5.0 MR.

153. (new) A method according to claim 104, wherein the compression deformable temperature is from 100°C to 130°C.

154. (new) A method according to 114, wherein the irradiation is gamma-irradiation.

155. (new) A method according to claim 114, wherein the raw UHMWPE article comprises UHMWPE having a weight average molecular weight of 2 - 8 million.

156. (new) A method according to claim 114, wherein the article comprises UHMWPE having 0.1 – 10 crosslinking points per 1 molecular chain.

157. (new) A method according to claim 114, wherein the irradiation dose is from 0.01 to 5.0 MR.

158. (new) A method according to claim 114, wherein the compression deformable temperature is from 100°C to 130°C.

159. (new) A method according to 130, wherein the irradiation is gamma-irradiation.

160. (new) A method according to claim 130, wherein the raw UHMWPE article comprises UHMWPE having a weight average molecular weight of 2 - 8 million.

161. (new) A method according to claim 130, wherein the article comprises UHMWPE having 0.1 – 10 crosslinking points per 1 molecular chain.

162. (new) A method according to claim 130, wherein the irradiation dose is from 0.01 to 5.0 MR.

163. (new) A method according to claim 130, wherein the compression deformable temperature is from 100°C to 130°C.

164. (new) A method according to 139, wherein the irradiation is gamma-irradiation.

165. (new) A method according to claim 139, wherein the raw UHMWPE article comprises UHMWPE having a weight average molecular weight of 2 - 8 million.

166. (new) A method according to claim 139, wherein the article comprises UHMWPE having 0.1 – 10 crosslinking points per 1 molecular chain.

167. (new) A method according to claim 139, wherein the irradiation dose is from 0.01 to 5.0 MR.

168. (new) A method according to claim 139, wherein the compression deformable temperature is from 100°C to 130°C.